Peroral endoscopic myotomy after transjugular intrahepatic portosystemic shunt and variceal embolization for a patient with achalasia and esophageal varices

A 54-year-old woman with achalasia was referred to our hospital for peroral endoscopic myotomy (POEM). She complained of dysphagia, regurgitation, vomiting, chest pain, and a weight loss of 10 kg in the past two years. Her body mass index was 17.03 kg/m². She was diagnosed with hepatitis B-related cirrhosis 2 years earlier. Esophagram showed a dilated esophagus with a significant delay of barium passing (▶Fig.1). Endoscopy showed an obvious dilated esophagus and persistently closed cardia with varices in the lower esophagus (▶Fig.2). Abdominal computed tomography (CT) angiography detected liver cirrhosis and gastroesophageal varices (▶Fig.3). Considering the high risk of bleeding during POEM, a transjugular intrahepatic portosystemic shunt (TIPS) and variceal embolization were implemented with the patient’s informed consent, after which the portal venous pressure gradient was reduced from 16 mmHg to 8 mmHg, and gastroesophageal varices also disappeared under angiography. Endoscopy after 2 months confirmed that the esophageal varices were no longer visible (▶Fig.4), and therefore the POEM procedure was performed (▶Video 1). During the procedure, several blood vessels were still encountered (▶Fig.5), but they were easily treated using high frequency electrocoagulation. After the POEM procedure, the patient’s symptoms obviously improved. The patient was doing well at her 1-year follow-up.

It is technically challenging for endoscopists to implement POEM in patients with esophageal varices [1]. The high risk of bleeding and difficult operation usually caused POEM to be abandoned [2]. In this case, treatment of varices by TIPS plus variceal embolization effectively reduced the risk of bleeding and enhanced the operability of POEM. Our experience suggests that POEM with prior TIPS plus variceal embolization could be an effective and safe treatment strategy for achalasia with esophageal varices.

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Competing interests
The authors declare that they have no conflict of interest.

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Fig. 4 Esophageal varices became invisible under endoscopy after transjugular intrahepatic portosystemic shunt and variceal embolization.

Fig. 5 Blood vessels encountered during peroral endoscopic myotomy (yellow arrow).